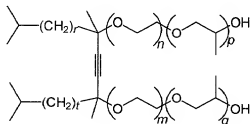CLAIMS

We claim:

1. A method for making an acetylenic diol ethylene oxide/propylene oxide adduct which is capped with two propylene oxide units which comprises reacting an acetylenic diol ethylene oxide adduct with propylene oxide in the presence of a catalytically effective amount of a trialkylamine, the acetylenic diol moiety derived from 2,4,7,9-tetramethyl-5-decyne-4,7-diol or 2,5,8,11-tetramethyl-6-dodecyne-5,8-diol.

2. The method of Claim 1 in which the resulting adduct has the structure

where r and t are 1 or 2, $(n + m)$ is 1.3 to 30 and p and q are each 1.

3. The method of Claim 1 in which the trialkylamine is trimethylamine.

4. The method of Claim 2 in which $(n + m)$ is 1.3 to 15.

5. The method of Claim 2 in which $(n + m)$ is 1.3 to 10.

6. The method of Claim 2 in which the acetylenic diol moiety is derived from 2,4,7,9-tetramethyl-5-decyne-4,7-diol.
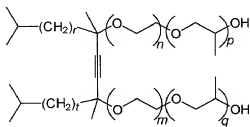
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7. The method of Claim 2 in which the acetylenic diol moiety is derived from 2,5,8,11-tetramethyl-6-dodecyne-5,8-diol.

8. The method of Claim 6 in which $(n + m)$ is 1.3 to 10.

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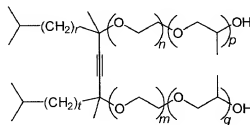9. The method of Claim 7 in which $(n + m)$ is 1.3 to 10.

10. The method of Claim 1 in which the temperature of the reaction is 40-150°C, the pressure is 2-20 bar and the trialkylamine is present at 0.001 to 10 wt% of the total

10 reactant mass.

11. An acetylenic diol ethylene oxide/propylene oxide adduct of the structure

where r and t are 1 or 2, $(n + m)$ is 1.3 to 30 and $(p + q)$ is 1 to 10, the ethylene oxide

15 and propylene oxide units being distributed along the alkylene oxide chain in blocks or randomly.

12. An acetylenic diol ethylene oxide/propylene oxide adduct of the structure

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where r and t are 1 or 2, $(n + m)$ is 1.3 to 30 and $(p + q)$ is 1 to 10, the ethylene oxide and propylene oxide units being distributed along the alkylene oxide chain in blocks.

13. The acetylenic diol ethylene oxide/propylene oxide adduct of Claim 12 in which the adduct is capped with the propylene oxide units.

14. The acetylenic diol ethylene oxide/propylene oxide adduct of Claim 13 in which $(n + m)$ is 1.3 to 15.

15. The acetylenic diol ethylene oxide/propylene oxide adduct of Claim 13 in which $(n + m)$ is 1.3 to 10 and $(p + q)$ is 1 to 3.

16. The acetylenic diol ethylene oxide/propylene oxide adduct of Claim 13 in which the acetylenic diol moiety is derived from 2,4,7,9-tetramethyl-5-decyne-4,7-diol.

17. The acetylenic diol ethylene oxide/propylene oxide adduct of Claim 13 in which the acetylenic diol moiety is derived from 2,5,8,11-tetramethyl-6-dodecyne-5,8-diol.

18. The acetylenic diol ethylene oxide/propylene oxide adduct of Claim 16 in which $(n + m)$ is 1.3 to 10 and $(p + q)$ is 1 to 3.

19. The acetylenic diol ethylene oxide/propylene oxide adduct of Claim 17 in which $(n + m)$ is 1.3 to 10 and $(p + q)$ is 1 to 3.

20. The acetylenic diol ethylene oxide/propylene oxide adduct of Claim 18 in which $(p + q)$ is 2.

21. The acetylenic diol ethylene oxide/propylene oxide adduct of Claim 19 in which $(p + q)$ is 2.

22. The acetylenic diol ethylene oxide/propylene oxide adduct of Claim 20 which is the 5 mole ethoxylate/2 mole propoxylate adduct of 2,4,7,9-tetramethyl-5-decyne-4,7-diol.

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